

PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTONTHE SUBSPECIES OF *THYROPTERA DISCIFERA*
(LICHTENSTEIN AND PETERS)

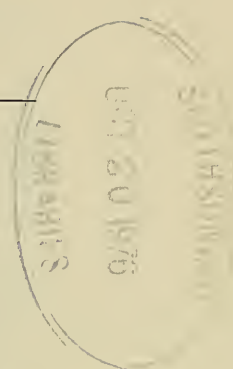
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In describing *Hyonycteris* (= *Thyroptera*) *discifera* in 1855, Lichtenstein and Peters listed the type-locality as: "Habitatio: Puerto Cabello (America Centralis)." In a subsequent publication discussing *Thyroptera tricolor* Spix, Peters (1866) stated: "Diese Art ist grösser und hat auch einen längern und auffallend mehr hervorragenden Schwarz als die van mir beschriebene *Th. (Hyonycteris) discifera* aus Puerto Cabello in Venezuela."

Apparently misled by the "America Centralis" in the original description and unaware of the 1866 work, Miller (1896) listed the type-locality as "Puerto Caballos, Honduras" in his redescription of the species. Subsequent workers (Goodwin, 1942, 1946; Miller and Kellogg, 1955; Cabrera, 1958; Hall and Kelson, 1959) have continued to place the type-locality in Honduras.

Three specimens of *Thyroptera discifera* collected by J. E. Mitchell on the Escondido River at a point about 50 mi from Bluefields, Nicaragua, and now in the National Museum of Natural History, were used by Miller as a basis for his (1896) redescription of the species. In 1931, Miller described *Thyroptera discifera major* based on a series of specimens collected at San Julian, Venezuela by Robinson and Lyon (1901). This action was based on his belief that the nominate form was from Central America, but in fact *T. d. major* is a junior synonym of *T. d. discifera* and the Nicaraguan population is without a name.



This paper provides a redescription of the species and a description of the Central American subspecies.

Thyroptera discifera (Lichtenstein and Peters)

Hyonycteris discifera Lichtenstein and Peters, 1855:335.

Th. (*Hyonycteris*) *discifera* Peters, 1866:581.

Thyroptera discifera major Miller, 1931:411.

Lectotype: An adult male, Zoolisches Museum der Humboldt-Universität zu Berlin number 59067, spirit-preserved with skull in place, collected by Appun.

Type-locality: Puerto Cabello, Venezuela.

Distribution: Known from Nicaragua (Miller, 1896), and northern South America from French Guiana to Peru (Cabrera, 1958).

Measurements: Measurements of the lectotype and paralectotype are given in Table 1.

Definition: A small bat with cinnamon brown pelage dorsally, and slightly paler pelage on the venter. Circular suctorial discs present on the thumbs and hind feet. The calcar is about 9 mm long, keeled, and has a single cartilaginous lobule projecting posteriorly. The skull is small and delicate with an inflated braincase rising abruptly from the rostrum (Fig. 1). The upper incisors are bifid and the lower incisors are trifid.

Diagnosis: The only other species in the family is *Thyroptera tricolor* Spix. *Thyroptera discifera* averages slightly smaller than *T. tricolor* in almost all external measurements. *Thyroptera tricolor* has a white or partly white venter, whereas that of *T. discifera* is only slightly paler than the dorsum. In addition, most *T. tricolor* are darker dorsally than *T. discifera*.

In *T. tricolor*, the tail projects 5–8 mm beyond the interfemoral membrane, whereas in *T. discifera* only the last two caudal vertebrae (2 mm) project beyond the free edge of the membrane. *Thyroptera tricolor* usually has two cartilaginous lobules on the posterior edge of the calcar and *T. discifera* has only one.

The skulls and dentitions of the two species are similar, although *T. discifera* averages smaller. Both upper incisors are usually distinctly bifid in *T. discifera*, but in *T. tricolor* often only the inner upper incisor is distinctly bifid.

Thyroptera discifera shows considerable color variation. The series of specimens collected by Robinson and Lyon from San Julian, Venezuela contains one animal which is almost black above and below and one which is pale yellowish brown dorsally and grayish white ventrally. A variety of yellowish and cinnamon browns are displayed by the remainder of the series. In most cases, the venter is only scarcely paler than the dorsum, regardless of the dorsal coloration.

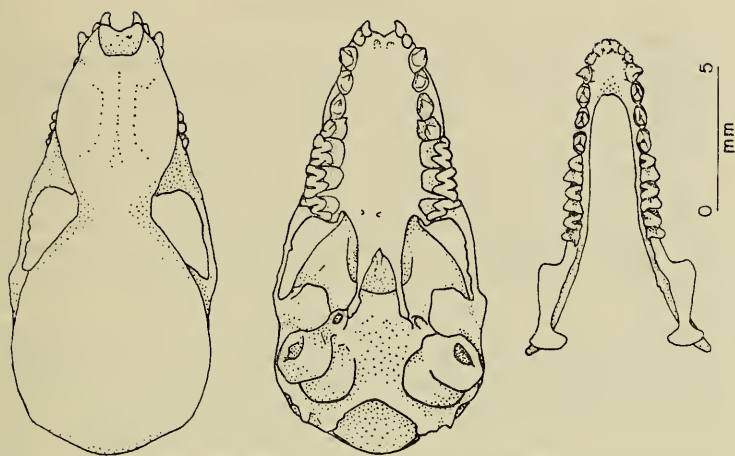


FIG. 1. Lateral views of skull and mandible and occlusal views of mandibular and maxillary tooththrows of *Thyroptera discifera*.

Table 1 provides measurements of *T. discifera*. Additional descriptive features were given by Lichtenstein and Peters (1855b) and Miller (1896).

Remarks: Lichtenstein and Peters (1855a) based the original description on three specimens, all males, collected by Appun in Puerto Cabello, Venezuela. Two of these syntypes remain in the collection of the Zoologisches Museum der Humboldt-Universität zu Berlin and are herein designated the lectotype and paralectotype. Both the specimen labels and the catalog refer to the locality of collection as "Puerto Cabello, Venezuela." That the actual type locality is Puerto Cabello, Venezuela, and not Puerto Caballos, Honduras, as interpreted by Miller (1896) seems certain. Appun included other material from Puerto Cabello, Venezuela, in his shipment to the Berlin Museum, most notably the holotype of *Vampyrops vittatus* (see Gardner and Carter, 1972).

Thyroptera discifera *abdita*, new subspecies

Holotype: An adult female, USNM 51538, fluid-preserved with skull and mandibles removed and cleaned, collected July 25, 1892, by J. E. Mitchell. The skin is in good condition except for a slight slippage of fur on the dorsum and around the ventral incision. The colors have probably become paler after more than 80 years in preservative. The mandibles are separated and the left zygomatic arch is broken.

Type-locality: Escondido River, 50 mi east of Bluefields, Nicaragua.

Distribution: Known only from the type-locality.

Measurements: See Table 1.

Definition: A small yellowish brown bat, slightly paler ventrally. Externally, it resembles South American *T. discifera* except for smaller size (Table 1).

Diagnosis: *Thyroptera discifera abdita* needs comparison only with *T. d. discifera* from South America. The smaller size of *T. d. abdita* indicates that it represents a population morphologically distinct from the South American members of this species. This, and the large hiatus between northern South American and Nicaraguan populations, warrant the recognition of the Central American form as a distinct subspecies.

Description: This description is primarily based on the holotype since the paratypes (USNM 51539 and USNM 51540, female and male, respectively) are immatures. The posterior edge of the calcar has a strongly defined keel supported by one cartilaginous process. The terminal 2 mm of the tail project beyond the uropatagium. The uropatagium is sparsely furred with long hairs, some of which form a fringe along the posterior border.

The feet are small (4 mm) and delicate with each toe composed of two phalanges. All of the digits of the hind foot are connected by skin, and the third and fourth are syndactylous. The circular sucking disk on each hind foot is somewhat smaller than those on the thumbs.

The membranes are thin and transparent. The wing membranes attach to the middle of the digits of the hind feet. Sparsely distributed hairs cover the wings near the sides of the body and along the humerus and forearm. The proximal part of the forearm and the entire upper arm are densely haired.

The funnel-shaped ears are short, with the tips acutely pointed and not projecting beyond the muzzle when laid forward. A large lower lobe is isolated from the rest of the pinna by a distinct basal notch. The tragus is short and broad with a thickened tip.

The skull is light and delicate, with the globose braincase rising abruptly from the rostrum. The inner upper incisor is twice the size of the outer and both are bifid. The premolars are contiguously in line in the toothrow with no spaces separating them from the canine or first molar. The second molar is the largest and the third the smallest. The lower incisors are small and trifid.

Remarks: The name *abdita* means hidden or secret, and refers both to the confused nomenclatural history of the species and to the fact that the subspecies has not been collected since the holotype and paratypes were taken in 1892.

The bats collected by Robinson and Lyon in Venezuela were captured in two groups, one of 10 individuals and a second of 7. Both tightly clustered groups were found by natives who captured them by hand as the bats clung to the under surface of dead banana leaves.

This roosting habit is quite different from that of *T. tricolor*, which

TABLE 1. Measurements (mm) of *Thyroptera discifera*. Original description (1), lectotype (2) and paralectotype (3).

Character	<i>T. d. discifera</i>			Venezuelan range (n)	<i>T. d. abdita</i> Holotype
	1	2	3		
Total length	70	70.9	66	70 - 80 (6)	61
Ear length	11.5	11.7	10.7	11 - 12 (3)	11
Forearm length	33	34.0	33.8	33.4 - 35.4 (9)	31.1
Metacarpal III	31	32.8	34.3	31 - 34.5 (2)	29.7
Digit III, phalanx 1	15	15.5	14.8	14.7 - 16.7 (2)	14.5
Digit III, phalanx 2	10.25	10.6	9.8	9.6 - 10.0 (2)	8.5
Metacarpal IV	30	31.8	33.2	29.8 - 33.8 (2)	29.1
Digit IV, phalanx 1	10.5	11.1	10.1	9.3 - 10.5 (2)	10.0
Digit IV, phalanx 2	7	7.3	6.3	6.3 - 6.5 (2)	5.1
Metacarpal V	28	30.7	30.6	27.1 - 31.4 (2)	26.7
Digit V, phalanx 1	8.75	8.6	8.1	8.7 - 8.9 (2)	8.6
Digit V, phalanx 2	7	7.4	6.9	6.8 - 7.2 (2)	5.8
Tibia length	15	16.3	15.8	16.2 - 16.4 (2)	14.0
Tail length	32	30.7	29.8	28 - 33 (8)	24
Condyllocanine length				12.6 - 12.9 (4)	12.05
Mastoid breadth				6.80 - 7.00 (4)	6.70
Zygomatic breadth				6.95 - 7.10 (4)	6.90
Braincase breadth				6.7 - 6.8 (4)	6.6
Interorbital breadth				2.50 - 2.75 (5)	2.55
Rostral breadth				3.95 - 4.25 (4)	3.95
Maxillary toothrow				5.60 - 5.85 (5)	5.40
Width across canines				2.70 - 2.85 (4)	2.85
Width across molars				4.65 - 5.10 (4)	4.85

roosts in rolled *Heliconia* leaves (Findley and Wilson, 1974). *Thyroptera* are notoriously difficult to capture in mist nets and probably only a careful search for roosting sites will yield additional specimens.

Specimens examined: Thyroptera discifera discifera: VENEZUELA. Puerto Cabello, 2 (ZMB-59067, lectotype; ZMB-437, paralectotype); San Julian, 14 (USNM 105419, holotype of *T. d. major* Miller; USNM 102923-8; USNM 105420-3; USNM 143782-4). COLOMBIA. La Guayacana, 1 (USNM 309067). *Thyroptera discifera abdita*: NICARAGUA. Escondido River, 50 mi from Bluefields, 3 (USNM 51538-40).

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